

this chapter. Additionally, all fiber reinforced plastic (FRP) vessels constructed with general purpose resins must be fitted with a smoke activated fire detection system of an approved type, installed in accordance with § 76.27 in subchapter H of this chapter, in all accommodation spaces, all service spaces, and in isolated spaces such as voids and storage lockers that contain an ignition source such as electric equipment or piping for a dry exhaust system.

(4) *Machinery space boundaries.* Boundaries that separate machinery spaces from accommodation spaces, service spaces, and control spaces must be lined with noncombustible panels or insulation approved in accordance with § 164.009 in subchapter Q of this chapter, or other standard specified by the Commandant.

(5) *Furnishings.* Furniture and furnishings must comply with § 116.423 in subchapter K of this chapter.

(d) *Limitations on the use of general purpose resin—(1) Overnight accommodations.* Vessels with overnight passenger accommodations for more than 12 persons must not be constructed with general purpose resin.

(2) *Gasoline fuel systems.* Vessels with engines powered by gasoline or other fuels having a flash point of 43.3° C (110° F) or lower must not be constructed with general purpose resin, except for vessels powered by outboard engines with portable fuel tanks stored in an open area aft, if, as determined by the cognizant OCMI, the arrangement does not produce an unreasonable hazard.

(3) *Cargo.* Vessels carrying or intended to carry hazardous combustible or flammable cargo must not be constructed with general purpose resin.

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Subpart E—Escape Requirements

§ 177.500 Means of escape.

(a) Except as otherwise provided in this section, each space accessible to passengers or used by the crew on a regular basis, must have at least two

means of escape, one of which must not be a watertight door.

(b) The two required means of escape must be widely separated and, if possible, at opposite ends or sides of the space to minimize the possibility of one incident blocking both escapes.

(c) Subject to the restrictions of this section, means of escape may include normal exits and emergency exits, passageways, stairways, ladders, deck scuttles, and windows.

(d) The number and dimensions of the means of escape from each space must be sufficient for rapid evacuation in an emergency for the number of persons served. In determining the number of persons served, a space must be considered to contain at least the number of persons as follows:

(1) Passenger overnight accommodation spaces: Designed capacity;

(2) Accommodation spaces having fixed seating for passengers: Maximum seating capacity;

(3) Public spaces, including spaces such as casinos, restaurants, club rooms, and cinemas, and public accommodation spaces as defined in § 175.400 of this subchapter, except overnight accommodation spaces: One person may be permitted for each 0.9 square meters (10 square feet) of deck area. In computing such deck area, the following areas must be excluded:

(i) Areas for which the number of persons permitted is determined using the fixed seating criterion;

(ii) Obstructions, including stairway and elevator enclosures, elevated stages, bars, and cashier stands, but not including slot machines, tables, or other room furnishings;

(iii) Toilets and washrooms;

(iv) Interior passageways less than 860 millimeters (34 inches) wide and passageways on open deck less than 710 millimeters (28 inches) wide;

(v) Spaces necessary for handling lifesaving equipment, anchor handling equipment, or line handling gear, or in way of sail booms or running rigging; and

(vi) Bow pulpits, swimming platforms, and areas that do not have a solid deck, such as netting on multi hull vessels;

(4) Crew overnight accommodation spaces: Two-thirds designed capacity; and

(5) Work spaces: Occupancy under normal operating conditions.

(e) The dimensions of a means of escape must be such as to allow easy movement of persons when wearing life jackets. There must be no protrusions in means of escape that could cause injury, ensnare clothing, or damage life jackets.

(f) The minimum clear opening of a door or passageway used as a means of escape must not be less than 810 millimeters (32 inches) in width, however, doors or passageways used solely by crew members must have a clear opening not less than 710 millimeters (28 inches). The sum of the width of all doors and passageways used as means of escape from a space must not be less than 8.4 millimeters (0.333 inches) multiplied by the number of passengers for which the space is designed.

(g) A dead end passageway, or the equivalent, of more than 6.1 meters (20 feet) in length is prohibited.

(h) Each door, hatch, or scuttle, used as a means of escape, must be capable of being opened by one person, from either side, in both light and dark conditions. The method of opening a means of escape must be obvious, rapid, and of adequate strength. Handles and securing devices must be permanently installed and not capable of being easily removed. A door, hatch or scuttle must open towards the expected direction of escape from the space served.

(i) A means of escape which is not readily apparent to a person from both inside and outside the space must be adequately marked in accordance with § 185.606 of this chapter.

(j) A ladder leading to a deck scuttle may not be used as a means of escape except:

(1) On a vessel of not more than 19.8 meters (65 feet) in length, a vertical ladder and a deck scuttle may be used as not more than one of the means of escape from passenger accommodation space; or

(2) As not more than one of the means of escape from any crew accommodation space or work space.

(k) Each ladder used as a means of escape must be mounted at least 180 mil-

limeters (7 inches) from the nearest permanent object in back of the ladder. Rungs must be:

(1) At least 405 millimeters (16 inches) in width; and

(2) Not more than 305 millimeters (12 inches) apart, and uniformly spaced for the length of the ladder with at least 114 millimeters (4.5 inches) clearance above each rung.

(l) When a deck scuttle serves as a means of escape, it must not be less than 455 millimeters (18 inches) in diameter and must be fitted with a quick acting release and a holdback device to hold the scuttle in an open position.

(m) Footholds, handholds, ladders, and similar means provided to aid escape, must be suitable for use in emergency conditions, of rigid construction, and permanently fixed in position, unless they can be folded, yet brought into immediate service in an emergency.

(n) On a vessel of not more than 19.8 meters (65 feet) in length, a window or windshield of sufficient size and proper accessibility may be used as one of the required means of escape from an enclosed space, provided it:

(1) Does not lead directly overboard;

(2) Can be opened or is designed to be kicked or pushed out; and

(3) Is suitably marked.

(o) Only one means of escape is required from a space where:

(1) The space has a deck area less than 30 square meters (322 square feet);

(2) There is no stove, heater, or other source of fire in the space;

(3) The means of escape is located as far as possible from a machinery space or fuel tank; and

(4) If an accommodation space, the single means of escape does not include a deck scuttle or a ladder.

(p) Alternative means of escape from spaces may be provided if acceptable to the cognizant OCMI.

[CGD 85-080, 61 FR 961, Jan. 10, 1996; 62 FR 64306, Dec. 5, 1997]